EBI Consulting
environmental | engineering | due diligence

21 B Street
Burlington, MA 01803
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February 15, 2022

Manchester Heritage Commission
City of Manchester Planning and Community Development Dept.
Attn: Kevin McCue, Chairman
One City Hall Plaza
Manchester, NH 03101
(603) 624-6450
pcd@manchesternh.gov

Subject: Invitation to Comment
12717293 / NH4369 / Manchester 1505 Elm Street
1505 Elm Street, Manchester, Hillsborough County, NH
EBI Project #6121001827

Dear Kevin McCue:

Pursuant to Section 106 of the National Historic Preservation Act, the regulations promulgated thereunder, and interagency agreements developed thereto, EBI Consulting, Inc., on behalf of AT&T Mobility, LLC, provides this notice of a proposed telecommunications facility installation at the address listed above.

On April 1, 2021, EBI submitted to your office an invitation to comment letter containing maps and project drawing for the above-mentioned project. AT&T Mobility, LLC has since revised their project plans. EBI would like to inquire if you would be interested in commenting on the proposed project revisions. Please refer to the attach project plans to update your records and for additional details regarding this project.

Please note that we are requesting your review of the attached information as part of the Section 106 process only and not as part of the local zoning process. We are only seeking comments related to the proposed project's potential effect to historic properties.

Please submit your comments regarding the proposed project's potential effect on historic properties to EBI Consulting, to my attention at 21 B Street, Burlington, MA 01803, or contact me via telephone at the number listed below. Please reference the EBI project number. We would appreciate your comments as soon as possible within the next 30 days. Please do not hesitate to contact me if you have any questions or concerns about the proposed project.

Please note that this project will be entered into the Federal Communication Commission's e106 System, which will send notifications of the project throughout the Section 106 process.

Respectfully Submitted,

Alex O'Gorman, M.A.
Historian
aogorman@ebiconsulting.com
908-458-3192

Attachments - Drawings and Maps

Legend

- ★ Project Site
- Site Radius at 250', 500', 1000' and ½ mile

Date: 3/19/2021

Figure 1: Site Location Map

12717293 / NH4369 MANCHESTER 1505 ELM STREET
1505 ELM STREET
MANCHESTER, NH 03104

PN: 6121001827

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Legend

★ Project Site

Site Radius at 250', 500', 1000' and ½ mile

USGS 24K Quad: Manchester South, NH 1986, Manchester North, NH 1986

Date: 3/19/2021

Figure 2 - Topographic Map

12717293 / NH4369 MANCHESTER 1505 ELM STREET
1505 ELM STREET
MANCHESTER, NH 03104

PN: 6121001827

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SITE NUMBER: NH4369
SITE NAME: MANCHESTER 1505 ELM STREET
PROJECT: LTE NSB
I-PLAN JOB #: NER-RCTB-19-01106
PTN: 2102A0N84M
FA LOCATION CODE: 12717293

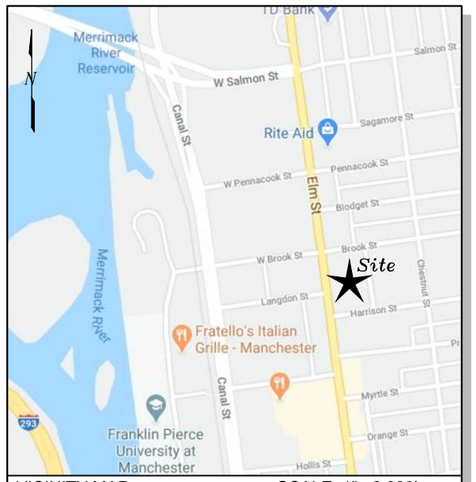
SITE NAME:	MANCHESTER 1505 ELM STREET
SITE ADDRESS:	1505 ELM STREET MANCHESTER, NH 03104
PROPERTY OWNER:	MANCHESTER MASONIC TEMPLE ASSOC. 1505 ELM STREET MANCHESTER, NH 03101
APPLICANT:	AT&T MOBILITY 550 COCHITUATE ROAD SUITES 13 & 14 FRAMINGHAM, MA 01701

CENTER OF PROPOSED ROOFTOP ANTENNA ARRAY:
HORIZONTAL DATUM: NORTH AMERICAN DATUM (NAD) 1983
LATITUDE: 42° 59' 57.8" N*
LONGITUDE: 71° 27' 48.6" W*

GROUND ELEVATION: 239'*

* COORDINATES AND ELEVATION TAKEN FROM 1A SURVEY PREPARED BY SFC ENGINEERING PARTNERSHIP, INC.

PROJECT SUMMARY



VICINITY MAP SCALE: 1"= 2,000'±

SCOPE OF WORK (ROOFTOP):

- INSTALL (3) STEEL SECTOR FRAMES (TYP. 1 PER SECTOR)
- INSTALL (6) ANTENNAS TOTAL (TYP. 2 PER SECTOR)
- INSTALL (12) RRUS TOTAL (TYP. 4 PER SECTOR)
- INSTALL (3) DC6 SQUIDS TOTAL (TYP. 1 PER SECTOR)
- INSTALL (6) DC POWER AND (2) FIBER TRUNKS
- LOWER CHIMNEY HEIGHT BY 33" (BY OTHERS)

SCOPE OF WORK (GROUND):

- INSTALL 14'x24' 8' TALL CHAIN LINK FENCE
- INSTALL (1) STEEL WALK-IN CABINET (WIC)
- INSTALL (1) POLAR 15 KW NATURAL GAS GENERATOR
- INSTALL CONCRETE PAD FOR WIC & GENERATOR
- INSTALL 24" CABLE TRAY
- INSTALL UTILITY H-FRAME
- ROUTE NATURAL GAS LINE FROM EXISTING UTILITY ROOM
- ROUTE DC & FIBER TRUNKS WITHIN EXISTING BUILDING & CHIMNEY STACK TO PENTHOUSE ANTENNA ARRAY
- INSTALL PVC SLEEPERS ON ROOFTOP & PENTHOUSE
- INSTALL UNDERGROUND CONDUIT FOR POWER AND TELCO

PROJECT DESCRIPTION

SHT. NO.	DESCRIPTION	REV. NO.	DATE
T-1	TITLE SHEET	3	12/14/21
N-1	GENERAL NOTES	3	12/14/21
C-1	SITE OVERVIEW PLAN	3	12/14/21
C-2	SITE PLAN	3	12/14/21
C-3	ELEVATION PLAN	3	12/14/21
D-1	WIC FOUNDATION DETAILS	3	12/14/21
D-2	CONSTRUCTION DETAILS	3	12/14/21
D-3	COMPOUND DETAILS	3	12/14/21
D-4	APPURTENANCE SPECIFICATIONS	3	12/14/21
D-5	ANTENNA CONFIGURATION & DETAILS	3	12/14/21
D-6	EQUIPMENT PLUMBING DIAGRAM	3	12/14/21
E-1	ELECTRICAL DETAILS & RISER DIAGRAM	3	12/14/21
G-1	GROUNDING SCHEMATIC & DETAILS	3	12/14/21
S-1	STRUCTURAL DETAILS	1	10/27/21
N-1	NOTES & SPECIFICATIONS	1	10/27/21

SHEET INDEX

at&t
550 COCHITUATE ROAD
SUITES 13 & 14
FRAMINGHAM, MA 01701

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

SFC ENGINEERING
183 ROCKINGHAM ROAD
UNIT 3 EAST
WINDHAM, NH 03087
(603) 647-8700
www.sfceng.com

No.	Date	Revision	By
3	12/14/21	LOWERED CHIMNEY HT.	JRR
2	11/10/21	UPDATED STRUCTURAL	JRR
1	4/16/21	GENERATOR MODEL NO.	JRR
.	1/6/21	SUBMITTED FOR REVIEW	JRR

DESIGNED BY: JRR	DATE: 1/6/21
DRAWN BY: JRR	SCALE: N/A
CHECKED BY: JMB	PROJECT NO: 659880

STATE OF NEW HAMPSHIRE – JOHN R. RUSSO No. 15934 – PROFESSIONAL ENGINEER

PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR - AT&T MOBILITY
   SUBCONTRACTORS - GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER - AT&T MOBILITY
   OEM - ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
5. EQUIPMENT DETAIL DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNERS DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
14. SUBCONTRACTOR SHALL NOTIFY SFC ENGINEERING PARTNERSHIP 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACK FILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.
15. CONSTRUCTION SHALL COMPLY WITH AT&T MOBILITY SITES.
16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
   SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, AT&T MOBILITY ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.
2. COORDINATION OF WORK:
   SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
3. CABLE LADDER RACK:
   SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW SHELTER LOCATION.

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D)TRENCHING & EXCAVATING.
3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE SHELTER AND TOWER AREAS.
6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
7. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEER, OWNER AND/OR LOCAL UTILITIES.
9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE AT&T MOBILITY SPECIFICATION FOR SITE SIGNAGE.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
2. SLAB ON GRADE SHALL BE FOUNDED ON NATURAL UNDISTURBED MATERIAL OR UPON COMPACTED STRUCTURAL FILL HAVING A MINIMUM SAFE BEARING CAPACITY OF 2000 PSF.
3. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
4. AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW; TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
5. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVEL. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.
6. AS AN ALTERNATE TO ITEMS 2 AND 3, COMPACT THE SUBGRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E) AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE SHALL BE MIXED, PLACED, CURED, AND TESTED IN ACCORDANCE WITH ACI 318 AND ACI 301 EXCEPT THAT PROVISIONS OF THE SPECIFICATION PREVAIL WHERE MORE STRINGENT.
2. CONTRACTOR SHALL SELECT MIX DESIGNS IN ACCORDANCE WITH ACI 318 SECTION 5.3 "PROPORTIONING ON THE BASIS OF EXPERIENCE AND/OR TRIAL MIXTURES" FOR EACH TYPE OF CONCRETE FOR REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO PERFORMING CONCRETE WORK. EACH CONCRETE MIX SHALL UTILIZE THE LARGEST PRACTICABLE NOMINAL MAXIMUM COURSE AGGREGATE IN ACCORDANCE WITH ACI 318 SECTION 3.3. USE OF CALCIUM CHLORIDE CONTAINING AGGREGATES OR ADMIXTURES IS NOT PERMITTED.
3. CONCRETE SHALL BE NORMAL WEIGHT, AIR ENTRAINED (5% TO 7%) WITH MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS
4. CONCRETE SLUMP SHALL NOT EXCEED 4 INCHES UNLESS A HIGH-RANGE WATER REDUCING ADMIXTURE IS UTILIZED, WHERE THE MAXIMUM SLUMP MAY BE INCREASED TO 8 INCHES.
5. GROUT UNDER BASE PLATES AND BEDDING PLATES SHALL BE NON-SHRINKING AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI AT 7 DAYS.
6. WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A497 (DEFORMED WIRE) FOR SIZES D4.0 AND LARGER, AND TO ASTM A195 (PLAIN WIRE) FOR SIZES W4.0 AND SMALLER.

   MINIMUM YIELD STRENGTH SHALL BE 70KSI AND 60KSI RESPECTIVELY FOR DEFORMED AND PLAIN WIRE.
7. DETAILING OF REINFORCING SHALL CONFORM TO ACI PUB. SP-66, ACI DETAILING MANUAL.
8. MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT IN ACCORDANCE WITH ACI 318, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL NOT INCREASE COVER AS A MEANS TO REDUCE DEVELOPMENT LENGTHS, LD, OF BARS UNLESS APPROVED BY STRUCTURAL ENGINEER.
9. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS OR AS ACCEPTED. WHERE SPLICING IS UTILIZED, SPLICES SHALL BE TENSION LAP SPLICES DEVELOPING THE FULL TENSILE CAPACITY OF THE REINFORCEMENT.

   MINIMUM LAP FOR DEFORMED WWF SHALL BE LESS THAN 1.3 TIMES THE DEVELOPMENT LENGTH (1.3LD) NOR 8 INCHES AND OVERLAP BETWEEN OUTERMOST CROSS WIRES SHALL BE AT LEAST 2 INCHES. MINIMUM LAP FOR SMOOTH WWF SHALL NOT BE LESS THAN ONE SPACING OF CROSS WIRES PLUS 2 INCHES, 1.5 TIMES THE DEVELOPMENT LENGTH (1.5LD) NOR 6 INCHES.

   WELDING OF REINFORCEMENT IS NOT ACCEPTABLE UNLESS SPECIFIED ON THE STRUCTURAL DRAWINGS OR SUBMITTED AND APPROVED BY THE STRUCTURAL ENGINEER.
10. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS OTHERWISE SHOWN ON THE STRUCTURAL DRAWINGS.
11. CONTRACTOR IS RESPONSIBLE FOR PROPER AND ADEQUATE SHORING OF ALL CONCRETE WORK INCLUDING FORM WORK, TIES, REINFORCING CHAIRS, STANDEES, ETC.
12. LOCATION OF ALL CONSTRUCTION JOINTS SHALL MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND ACI 318. DRAWINGS SHOWING LOCATION AND DETAILS OF PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED AND ACCEPTED PRIOR TO SUBMITTING REINFORCING STEEL SHOP DRAWINGS.
13. CONCRETE SLABS SHALL BE CAST SO THAT THE SLAB THICKNESS AT NO POINT IS LESS THAN THAT INDICATED ON THE STRUCTURAL DRAWINGS.
14. ALUMINUM ITEMS SHALL NOT BE PLACED IN CONCRETE.

STRUCTURAL STEEL NOTES:

1. ALL STRUCTURAL STEEL DESIGN, MATERIALS AND WORKMANSHIP SHALL CONFORM WITH AISC 341, AISC 360 AND ANSI/AWS D1.1 EXCEPT THAT PROVISIONS OF THE SPECIFICATION PREVAIL WHERE MORE STRINGENT.
2. ALL STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING WITH THE FOLLOWING UNLESS NOTED OTHERWISE ON THE PLANS.

   A. CHANNEL, ANGLES, AND BUILT-UP SHAPES — A992 OR A572 GR 50 FY = 50
   B. PLATES, BARS, AND RODS — A36 FY = 36
   C. HSS SHAPES — A500 GRB FY = 46

   WERE NOTED OTHERWISE PROVIDE THE INDICATED MINIMUM YIELD STRESS E.G. "FY 60" INDICATES A MINIMUM YIELD STRESS OF 60 KSI.
3. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE DRAWINGS AND AT&T MOBILITY SPECIFICATION 25252-000-3PS-GET-00001 UNLESS OTHERWISE NOTED.
4. ALL CUTS, HOLES, COPINGS, ETC. SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. FIELD CUTS, COPINGS, OR BURNING OF HOLES ETC. IN STRUCTURAL STEEL WILL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL BY ENGINEER FOR EACH CASE.
5. REINFORCING SHALL BE PROVIDED TO BEAMS AT CONNECTIONS WHERE CUTS HAVE REDUCED THE SHEAR OR MOMENT CAPACITY BELOW THAT REQUIRED TO SUSTAIN THE REACTIONS. FLANGES AND WEBS SHALL BE REINFORCED WHERE INADEQUATE TO SUSTAIN CONNECTION LOADS.
6. BOLTED CONNECTIONS:

   A. UNLESS NOTED OTHERWISE, CONNECTIONS SHALL USE 3/4" ØA325-N BOLTS IN STANDARD HOLES.
   B. THE CONNECTIONS SHALL BE PROPORTIONED TO CARRY A VERTICAL REACTION BASED UPON THE ALLOWABLE UNIFORM LOAD PER AISC BUT IN NO CASE SHALL BE LESS THAN TWO BOLTS.
7. WELDED CONNECTIONS SHALL BE PERFORMED BY CERTIFIED WELDERS WITH THE FOLLOWING CRITERIA:

   A. WELDING ELECTRODES: SERIES E70.
   B. FILLET WELDS: AISC MINIMUM BUT NOT LESS THAN 3/16" UNLESS OTHERWISE NOTED.
   C. FILLET WELDS ON GUSSET PLATES, SEATED CONNECTIONS, AND PLATE EXTENSIONS EXPOSED TO WEATHER SHALL BE RETURNED AROUND THE EDGES.
8. ERECTION

   A. VERIFICATION OF ADEQUACY OF ANCHOR RODS AND FOUNDATIONS TO RESIST ERECTION FORCES IS SOLELY THE RESPONSIBILITY OF THE STEEL ERECTOR.
   B. ERECTION AIDS AND TEMPORARY BRACING ARE NOT SHOWN HEREIN. THE DETAILING AND UTILIZATION OF THESE DEVICES IS SOLELY THE RESPONSIBILITY OF THE STEEL ERECTOR.
   C. STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUM BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
   D. BRACE CONNECTIONS TO BEAMS SUPPORTING CONCRETE FLOORS OR ROOFS SHALL NOT BE FINALLY BOLTED OR WELDED UNTIL AFTER THE SUPPORTED FLOOR IS PLACED.
   E. FILLER BEAMS SHALL BE SPACED EQUALLY BETWEEN ESTABLISHED DIMENSIONS UNLESS OTHERWISE NOTED.
9. SPLICING STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE ENGINEER

METAL DECK NOTES:

1. ALL STEEL DECK SHALL CONFORM TO: AISI STANDARD "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" EXCEPT THAT PROVISIONS OF THE SPECIFICATION PREVAIL WHERE MORE STRINGENT.
2. ALL STEEL DECK AND ACCESSORIES SHALL BE FABRICATED FROM STEEL SHEET CONFORMING TO ASTM A653, GRADE 33 AND GALVANIZED WITH A G60 COATING.
3. ALL STEEL DECK SHALL EXTEND A MINIMUM OF TWO SPANS UNLESS NOTED OTHERWISE.
4. FASTEN STEEL DECK AT SUPPORTS AND SIDE LAPS AS NOTED ON PLAN.

SHOP DRAWING NOTES:

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR STRUCTURAL STEEL.
2. DRAWINGS SHALL SHOW ALL LENGTHS, CONNECTIONS, SIZES, WELDS, ETC. AND RELATION OF MEMBERS TO AFFECTED CONSTRUCTION TRADES.
3. STRUCTURAL STEEL CONNECTIONS SHALL BE DESIGNED FOR THE LOADS SHOW ON PLAN AND IN THE STRUCTURAL STEEL NOTES.
4. DEVIATIONS FROM PLAN DETAILS SHALL BE CLEARLY SHOWN IN SUBMITTAL PACKAGE.
5. SHOP DRAWINGS WILL BE CHECKED FOR GENERAL DESIGN FEATURES ONLY. REVIEW DOES NOT COVER DIMENSIONS, QUANTITIES, ACCURACY FIT, AND ADEQUACY OF DETAILS WHICH ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. REVIEW DOES NOT COVER ITEMS OUTSIDE OF SFC'S SCOPE OF SERVICES.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
2. SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW SHELTER. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTIONS, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTIONS, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANEL BOARD AND CIRCUIT ID'S).
8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER) 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #3 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° C (90° C IF AVAILABLE)
15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATION, NEC AND ALL APPLICABLE LOCAL CODES.
32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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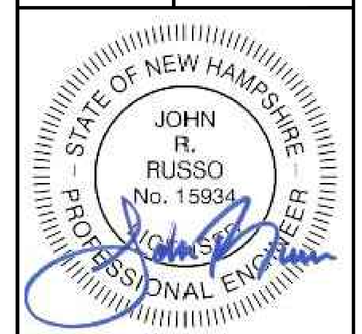
No.	Date	Revision	By
3	12/14/21	LOWERED CHIMNEY HT.	JRR
2	11/10/21	UPDATED STRUCTURAL	JRR
1	4/16/21	GENERATOR MODEL NO.	JRR
.	1/6/21	SUBMITTED FOR REVIEW	JRR

DESIGNED BY: JRR	DATE: 1/6/21
DRAWN BY: JRR	SCALE: N/A
CHECKED BY: JMB	PROJECT NO: 659880



PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

1505 ELM STREET
MANCHESTER, NH

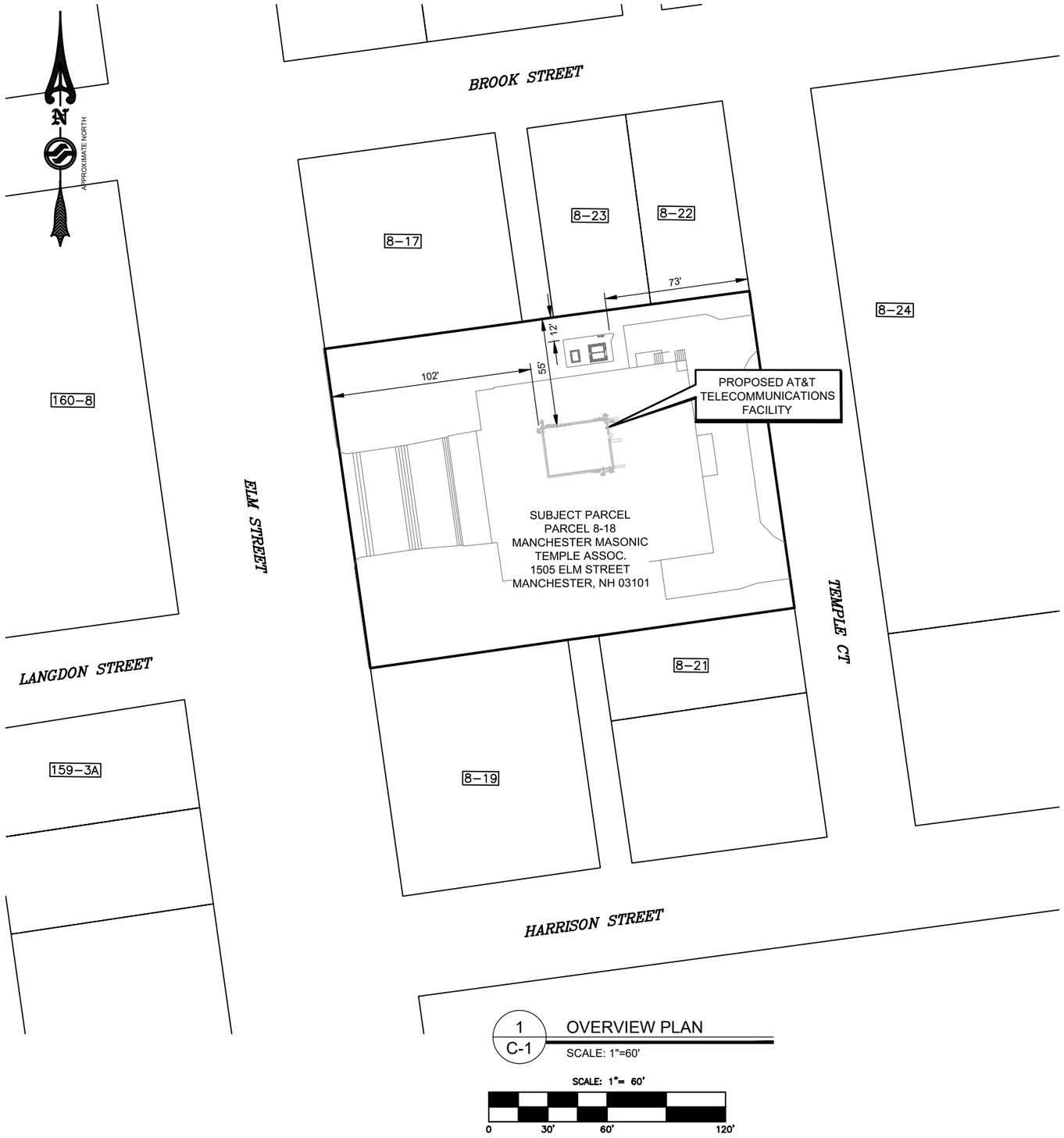
SHEET TITLE

GENERAL NOTES

SHEET NUMBER

N-1

Drawing name: M:\W\SAI\659880 NH4369 Manchester NH 1505 Elm Street\AutoCAD\NH4369 Manchester NH 1505 Elm Street CD Rev3.dwg



1 C-1 OVERVIEW PLAN

SCALE: 1"=60'

SCALE: 1"= 60'

0 30' 60' 120'

PLANS OF REFERENCE

1. CITY OF MANCHESTER GIS MAPS

NOTES

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE LOCATION OF A PROPOSED TELECOMMUNICATIONS FACILITY FOR AT&T MOBILITY AND TO SHOW THE EXISTING CONDITIONS OF THE PROPERTY ADJACENT TO OR AFFECTED BY THE PROPOSED PROJECT.
2. THE PROPERTY OWNER OF RECORD IS: MANCHESTER MASONIC TEMPLE ASSOCIATION.
3. BOUNDARY INFORMATION SHOWN ON THIS PLAN IS COMPILED FROM PLANS OF REFERENCE. THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY.
4. THIS PLAN REPRESENTS FIELD CONDITIONS AS LAST OBSERVED BY SFC ENGINEERING PARTNERSHIP, INC. ON MAY 5, 2020.
5. THE PROPOSED DEVELOPMENT IS NOT LOCATED IN THE 100 YEAR FLOOD HAZARD AREA AS INTERPRETED FROM THE FLOOD INSURANCE RATE MAPS FOR THE CITY OF MANCHESTER, COMMUNITY MAP NO. 33011C0377D, EFFECTIVE DATE: SEPTEMBER 25, 2009.
6. VERTICAL DATUM: NATIONAL AMERICAN VERTICAL DATUM (NAVD) 1988
   BENCH MARK: LEICA GPS.
7. HORIZONTAL DATUM: NORTH AMERICAN DATUM (NAD) 1983 BY PHASE PROCESSED GPS. CALCULATED COORDINATES AT THE CENTER OF THE PROPOSED ANTENNA ARRAY (PENTHOUSE):
   LATITUDE 42° 59' 57.8" N
   LONGITUDE 71° 27' 48.6" W
8. SOIL TYPES IN PROJECT AREA ARE URBAN LAND (Ur) (NRCS WEB SOIL SURVEY)
9. THE PROPOSED TELECOMMUNICATIONS FACILITY IS UNMANNED. NO WATER OR SANITARY FACILITIES ARE NECESSARY.
10. THIS FACILITY IS NOT FOR HUMAN OCCUPATION AND IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
11. THIS PROPOSAL WILL HAVE NEGLIGIBLE EFFECT ON STORMWATER VOLUME, QUALITY, AND RATE OF RUNOFF.
12. NO SIGNS WILL BE ERECTED ON SITE EXCEPT FOR THE IDENTIFICATION OF AN EMERGENCY POINT OF CONTACT AS REQUIRED BY THE FCC.
13. LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. CONTACT "DIG-SAFE" AT (888) 344-7233 PRIOR TO ANY CONSTRUCTION ACTIVITY.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING CONTROL AND TO LAYOUT THE CONSTRUCTION OF PROPOSED IMPROVEMENTS AND TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
15. TOWER AND ANTENNA DESIGN AND CONSTRUCTION SHALL COMPLY WITH THE NATIONAL TOWER CODE (ANSI/EIA/TIA 222-"H").

LIST OF ABUTTERS

MAP/LOT	RECORD OWNER	ADDRESS
8-17	1531 ELM STREET LLC	1531 ELM STREET MANCHESTER, NH 03104
8-18	MANCHESTER MASONIC TEMPLE ASSOCIATION	1505 ELM STREET MANCHESTER, NH 03101
8-19	88 ELM STREET LLC	23 ELM AVE HUDSON, NH 03051
8-21	MURRAY A. STRAUS	14 TEMPLE CT MANCHESTER, NH 03104
8-22	STATE OF NH	15 BROOK STREET MANCHESTER, NH 03103
8-23	ZHANG TING WANG	9 BROOK STREET MANCHESTER, NH 03104
8-24	RENAISSANCE 7 LTD PARTNERSHIP	PO BOX 10540 BEDFORD, NH 03110
159-3A	COMMUNITY RESOURCES JUSTICE INC	1490 ELM STREET MANCHESTER, NH 03101
160-8	CITY OF MANCHESTER	ONE CITY HALL PLAZA MANCHESTER, NH 03101

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No.	Date	Revision	By
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2	11/10/21	UPDATED STRUCTURAL	JRR
1	4/16/21	GENERATOR MODEL NO.	JRR
.	1/6/21	SUBMITTED FOR REVIEW	JRR

DESIGNED BY: JRR	DATE: 1/6/21
DRAWN BY: JRR	SCALE: 1"=20'
CHECKED BY: JMB	PROJECT NO: 659880

STATE OF NEW HAMPSHIRE – JOHN R. RUSSO No. 15934 – PROFESSIONAL ENGINEER

PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

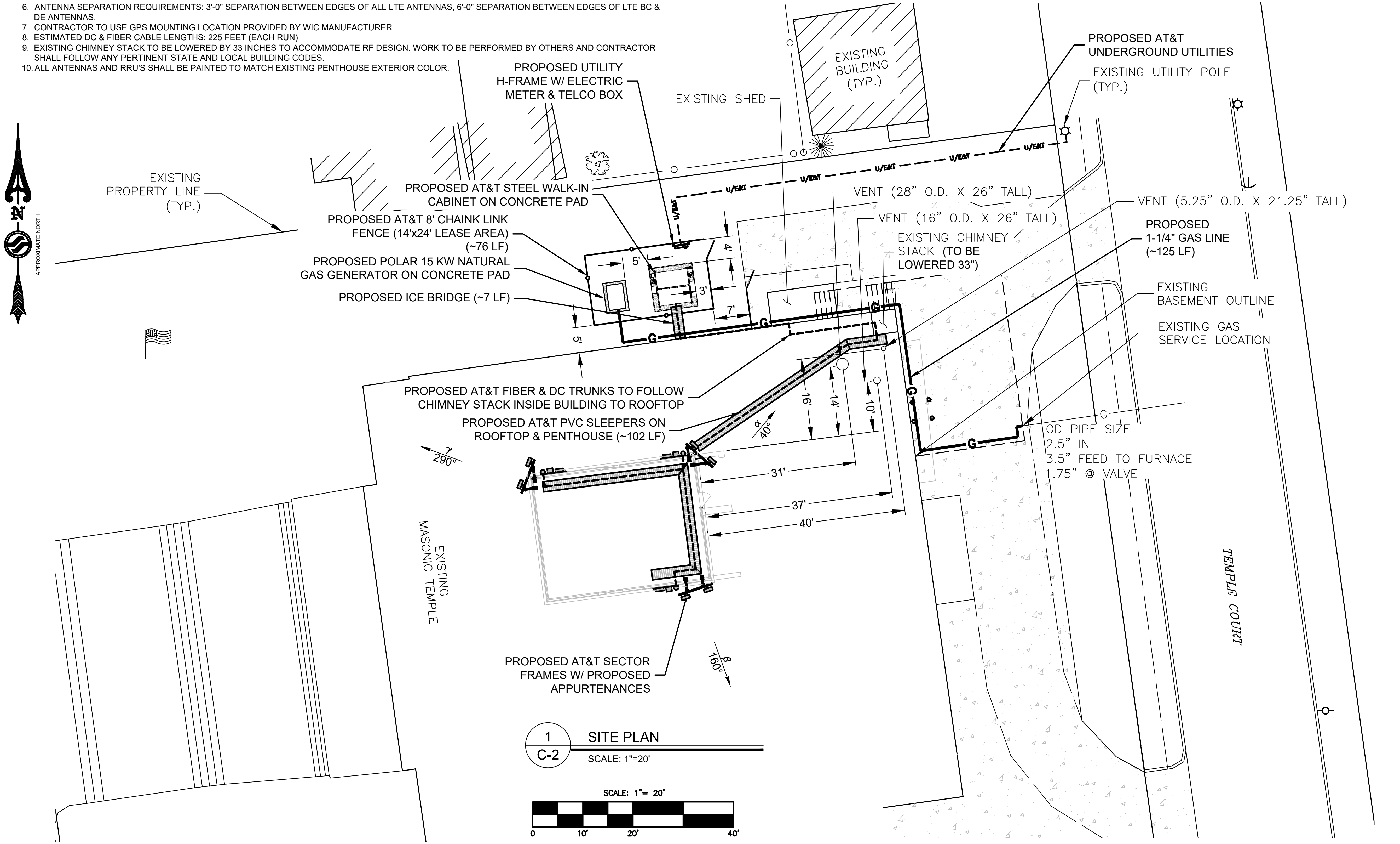
SITE OVERVIEW PLAN

SHEET NUMBER

C-1

NOTES:

1. CONTRACTOR TO VERIFY EXACT CABLE AND ANTENNA INSTALLATION WITH LATEST RF DATA SHEETS PRIOR TO INSTALLATION.
2. CONTRACTOR TO VERIFY EXACT ANTENNA HEIGHT WITH RF DATA SHEET PRIOR TO INSTALLATION.
3. THESE PLANS DO NOT INCORPORATE ANY DESIGN CONSIDERATIONS FROM A STRUCTURAL ANALYSIS PERFORMED BY A LICENSED PROFESSIONAL ENGINEER.
4. PRIOR TO CONSTRUCTION, AT&T MOBILITY SHALL PROVIDE A STRUCTURAL ANALYSIS OF THE BUILDING AND PENTHOUSE PREPARED BY A LICENSED STATE STRUCTURAL ENGINEER CERTIFYING THAT THE EXISTING BUILDING AND ANY REQUIRED IMPROVEMENTS AND REINFORCEMENTS HAVE SUFFICIENT CAPACITY TO SUPPORT ALL EXISTING LOADS AND PROPOSED ANTENNAS, SUPPORTS AND APPURTENANCES AND COMPLIES WITH THE CURRENT EDITION OF THE STATE BUILDING CODE AND EIA/TIA CRITERIA. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY AND ALL IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.
5. CONTRACTOR TO FIELD VERIFY ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
6. ANTENNA SEPARATION REQUIREMENTS: 3'-0" SEPARATION BETWEEN EDGES OF ALL LTE ANTENNAS, 6'-0" SEPARATION BETWEEN EDGES OF LTE BC & DE ANTENNAS.
7. CONTRACTOR TO USE GPS MOUNTING LOCATION PROVIDED BY WIC MANUFACTURER.
8. ESTIMATED DC & FIBER CABLE LENGTHS: 225 FEET (EACH RUN)
9. EXISTING CHIMNEY STACK TO BE LOWERED BY 33 INCHES TO ACCOMMODATE RF DESIGN. WORK TO BE PERFORMED BY OTHERS AND CONTRACTOR SHALL FOLLOW ANY PERTINENT STATE AND LOCAL BUILDING CODES.
10. ALL ANTENNAS AND RRU'S SHALL BE PAINTED TO MATCH EXISTING PENTHOUSE EXTERIOR COLOR.



1 / C-2 SITE PLAN

SCALE: 1"=20'

SCALE: 1"= 20'

0 10' 20' 40'

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.	1/6/21	SUBMITTED FOR REVIEW	JRR

DESIGNED BY: JRR	DATE: 1/6/21
DRAWN BY: JRR	SCALE: 1"=20'
CHECKED BY: JMB	PROJECT NO: 659880

STATE OF NEW HAMPSHIRE – JOHN R. RUSSO No. 15934 LICENSED – PROFESSIONAL ENGINEER

PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

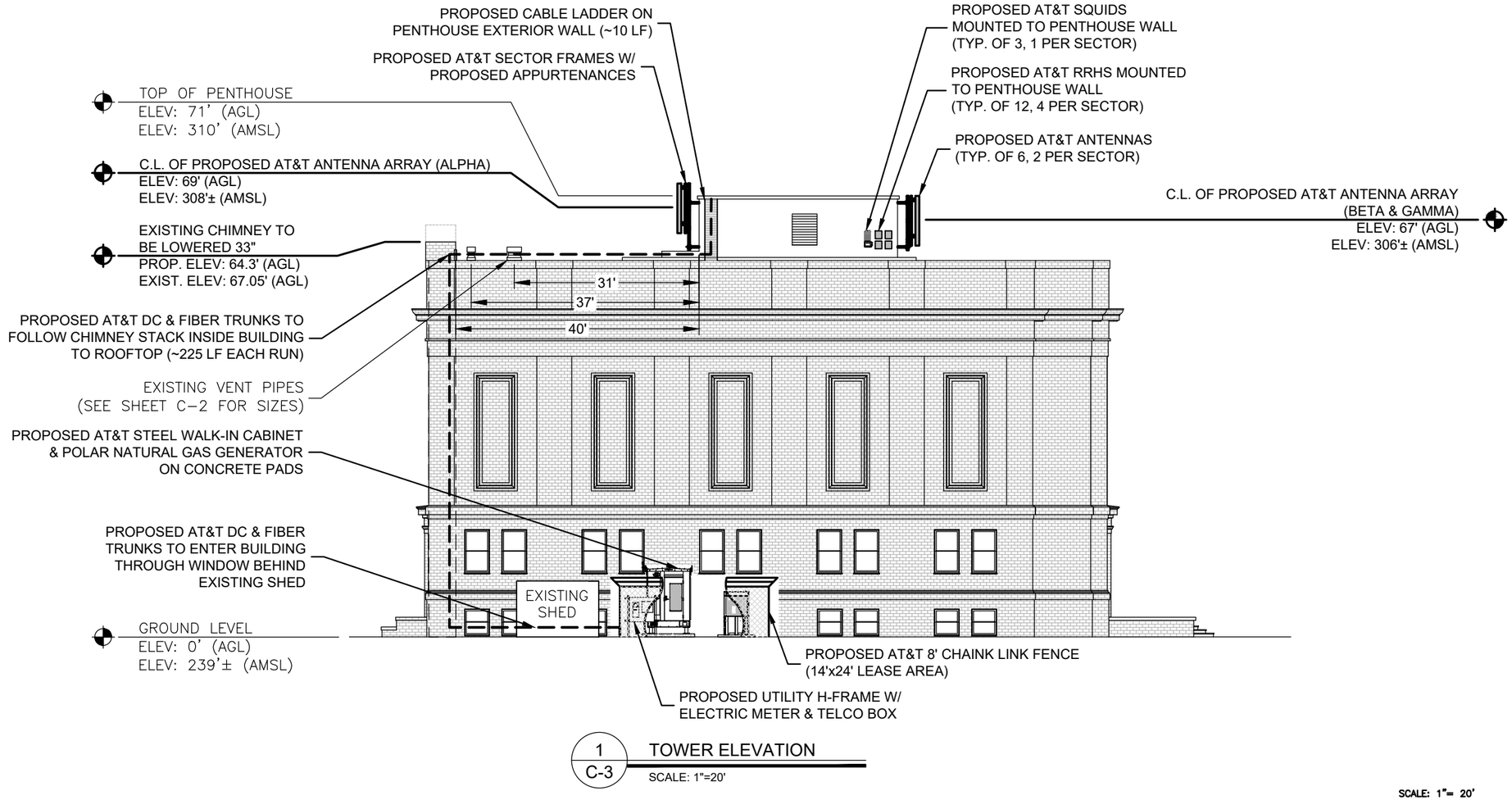
SITE PLAN

SHEET NUMBER

C-2

NOTES:

1. CONTRACTOR TO VERIFY EXACT CABLE AND ANTENNA INSTALLATION WITH LATEST RF DATA SHEETS PRIOR TO INSTALLATION.
2. CONTRACTOR TO VERIFY EXACT ANTENNA HEIGHT WITH RF DATA SHEET PRIOR TO INSTALLATION.
3. THIS DESIGN DOES NOT INCLUDE A STRUCTURAL ANALYSIS PERFORMED BY A LICENSED PROFESSIONAL ENGINEER.
4. DESIGN OF STEALTH CONCEALMENT WALLS PERFORMED BY OTHERS.
5. CONCEALMENT WALL AND ROOFTOP ANTENNA MOUNTS ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY. FINAL DESIGN MAY VARY.
6. PRIOR TO CONSTRUCTION, AT&T MOBILITY SHALL PROVIDE A STRUCTURAL ANALYSIS OF THE EXISTING BUILDING AND PENTHOUSE PREPARED BY A LICENSED STATE STRUCTURAL ENGINEER CERTIFYING THAT THE EXISTING BUILDING AND ANY REQUIRED IMPROVEMENTS AND REINFORCEMENTS HAVE SUFFICIENT CAPACITY TO SUPPORT ALL EXISTING LOADS AND PROPOSED ANTENNAS, SUPPORTS AND APPURTENANCES AND COMPLIES WITH THE CURRENT EDITION OF THE STATE BUILDING CODE AND EIA/TIA CRITERIA. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY AND ALL IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.
7. CONTRACTOR TO FIELD VERIFY ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
8. ANTENNA SEPARATION REQUIREMENTS: 3'-0" SEPARATION BETWEEN EDGES OF ALL LTE ANTENNAS, 6'-0" SEPARATION BETWEEN EDGES OF LTE BC & DE ANTENNAS.
9. CONTRACTOR TO USE GPS MOUNTING LOCATION PROVIDED BY WIC MANUFACTURER.
10. ESTIMATED DC & FIBER CABLE LENGTHS: 225 FEET (EACH RUN)
11. EXISTING CHIMNEY STACK TO BE LOWERED BY 33 INCHES TO ACCOMMODATE RF DESIGN. WORK TO BE PERFORMED BY OTHERS AND CONTRACTOR SHALL FOLLOW ANY PERTINENT STATE AND LOCAL BUILDING CODES.



1 / C-3 TOWER ELEVATION

SCALE: 1"=20'

SCALE: 1"= 20'

0 10' 20' 40'

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No.	Date	Revision	By
3	12/8/21	LOWERED CHIMNEY HT.	JRR
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1	4/16/21	GENERATOR MODEL NO.	JRR
.	1/6/21	SUBMITTED FOR REVIEW	JRR

DESIGNED BY: JRR	DATE: 1/6/21
DRAWN BY: JRR	SCALE: 1"=20'
CHECKED BY: JMB	PROJECT NO: 659880

STATE OF NEW HAMPSHIRE
JOHN R. RUSSO
No. 15934
LICENSED
PROFESSIONAL ENGINEER

PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

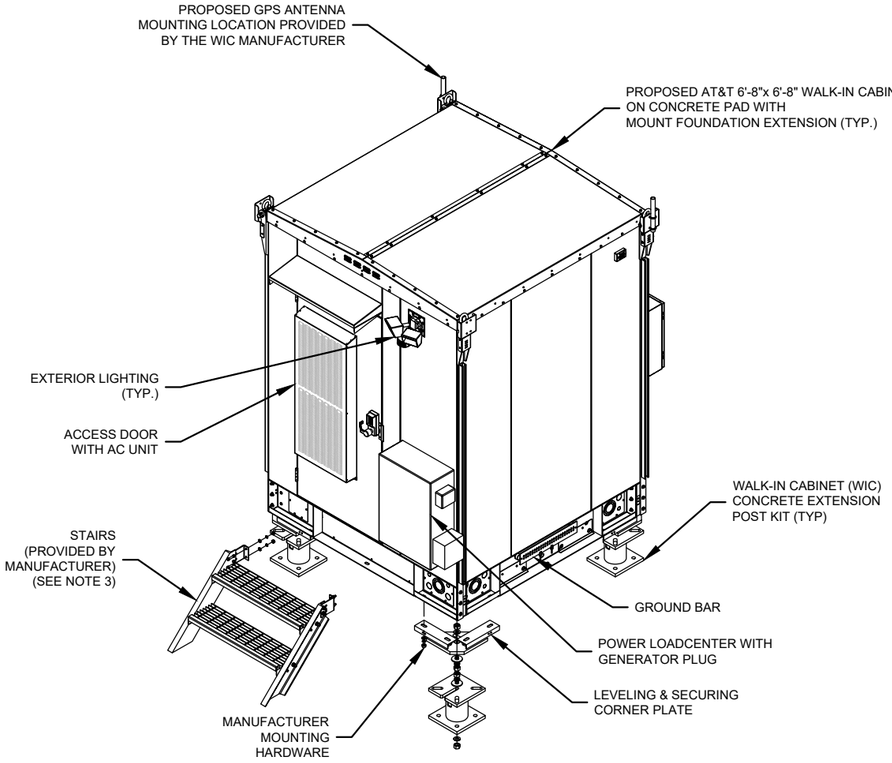
1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

ELEVATION PLAN

SHEET NUMBER

C-3

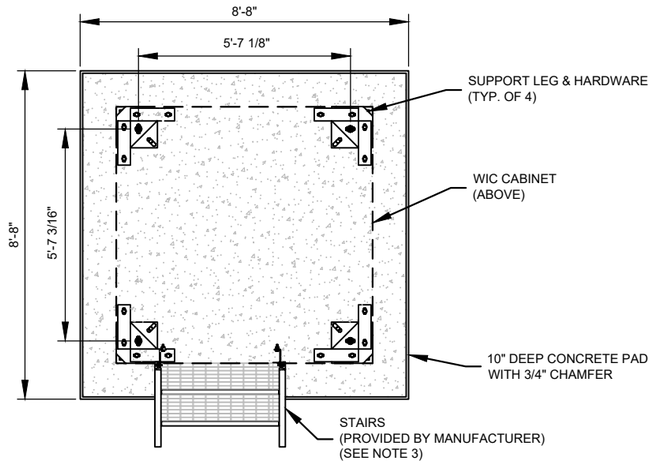


1 D-1 WALK-IN CABINET (WIC) DETAIL

SCALE: N.T.S.

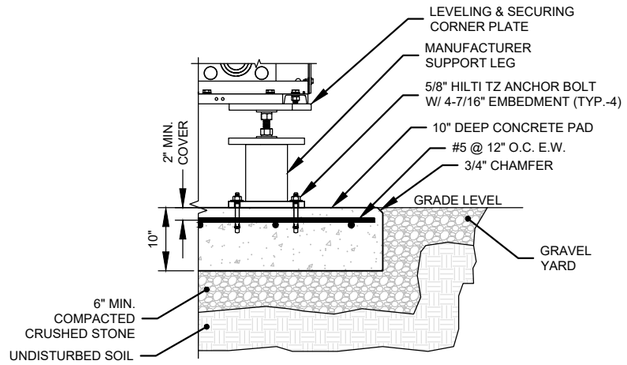
NOTES:

1. WALK-IN CABINET (WIC) TO BE INSTALLED ACCORDING TO MANUFACTURER RECOMMENDATIONS & SPECIFICATIONS.
2. CONTRACTOR TO CONFIRM PARTS & HARDWARE PRIOR TO CONSTRUCTION & COORDINATE WITH AT&T CM.
3. FOUNDATION TO BE FLUSH WITH EXISTING GRADE. CONTRACTOR SHALL MAINTAIN A MAXIMUM 18" CLEARANCE FROM GRADE TO BOTTOM OF WIC TO ACCOMMODATE STAIRS. VERIFY IN FIELD PRIOR TO POST INSTALLATION.
4. COORDINATE POWER & TELCO CONDUIT STUBUP PLACEMENT WITH ELECTRICAL TRADES.
5. PROVIDE WORKING HVAC AND ELECTRICAL WORKING SPACE CLEARANCES PER MANUFACTURER RECOMENDATIONS & CODE REQUIREMENTS.
6. WIC DIMENSIONS: 6'-8" X 6'-8" X 9'-6" TALL (NO BASE) WIC WEIGHT: 5500 LBS (EMPTY) 7500 LBS (FULLY INTEGRATED).
7. CONTRACTOR TO PROVIDE AND INSTALL SPECIFIED CONCRETE ANCHORS.



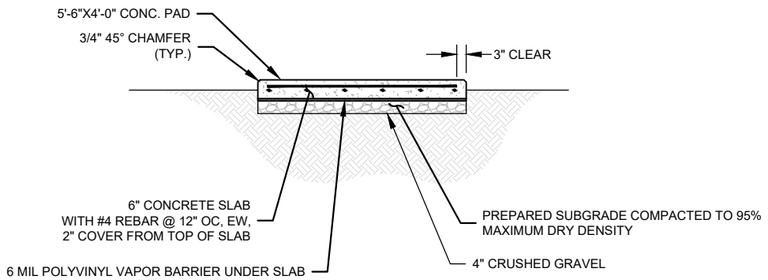
2 D-1 WIC FOUNDATION DETAIL

SCALE: N.T.S.



3 D-1 WIC BASE MOUNTING DETAIL

SCALE: N.T.S.



4 D-1 GENERATOR PAD DETAIL

SCALE: N.T.S.

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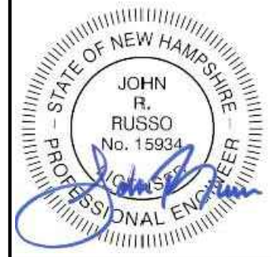
DESIGNED BY: JRR	DATE: 1/6/21
DRAWN BY: JRR	SCALE: N/A
CHECKED BY: JMB	PROJECT NO: 659880



PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

1505 ELM STREET
MANCHESTER, NH

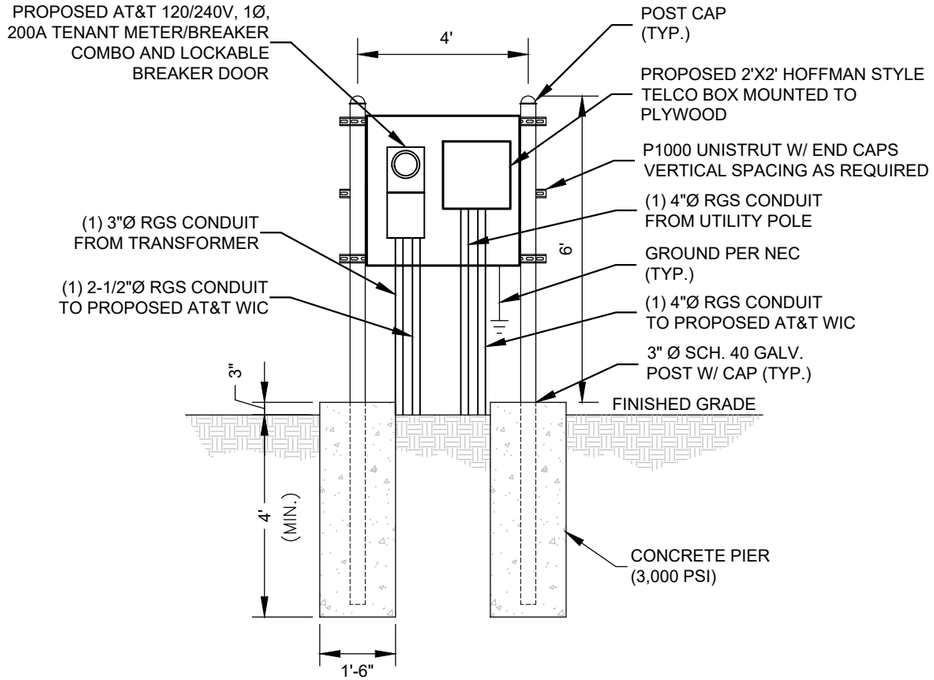
SHEET TITLE

WIC FOUNDATION DETAILS

SHEET NUMBER

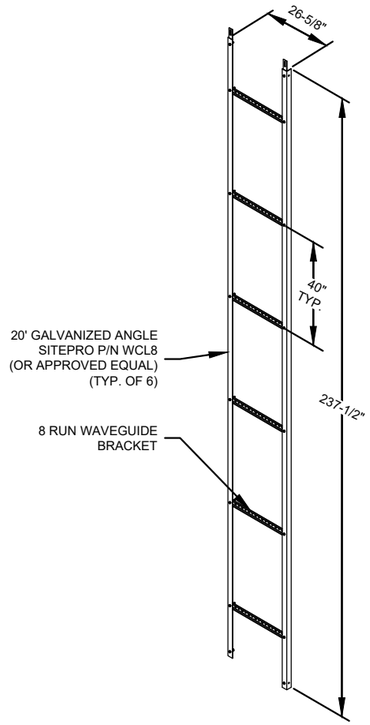
D-1

CONTRACTOR TO VERIFY ALL CONDUCTOR, FIBER & CONDUIT SIZES AND QUANTITIES WITH EE MEMO PREPARED BY BSP ELECTRIC INC., DATED: 5/5/2020



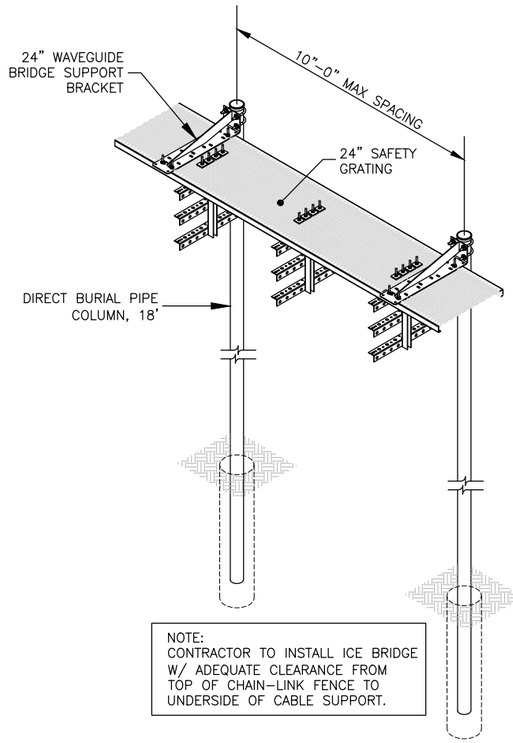
1 D-2 UTILITY H-FRAME DETAIL

SCALE: N.T.S.



2 D-2 CABLE LADDER DETAIL

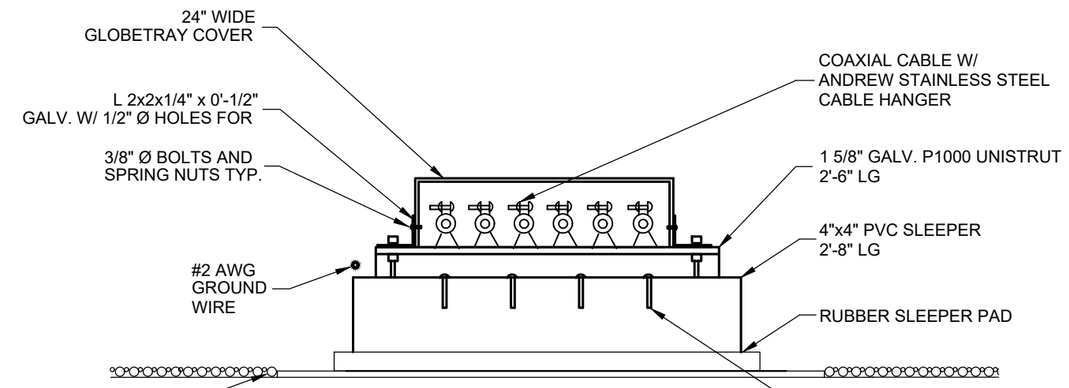
SCALE: N.T.S.



NOTE:
CONTRACTOR TO INSTALL ICE BRIDGE W/ ADEQUATE CLEARANCE FROM TOP OF CHAIN-LINK FENCE TO UNDERSIDE OF CABLE SUPPORT.

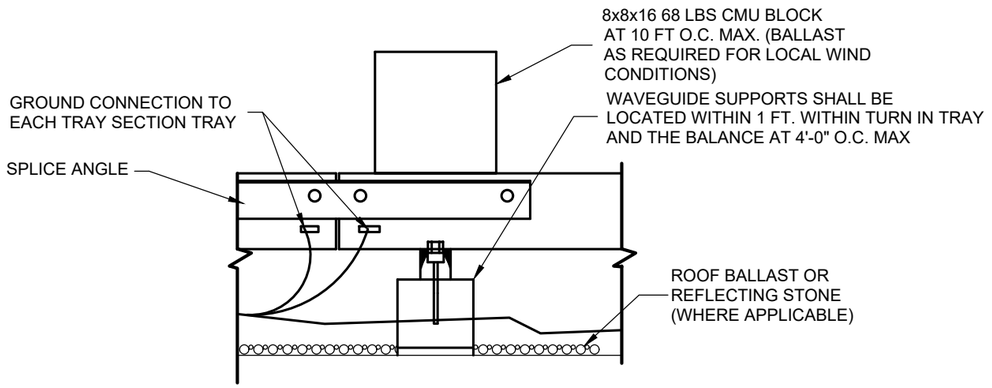
3 D-2 ICE BRIDGE DETAIL

SCALE: N.T.S.



4 D-2 SLEEPER DETAIL

SCALE: N.T.S.



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No.	Date	Revision	By
3	12/14/21	LOWERED CHIMNEY HT.	JRR
2	11/10/21	UPDATED STRUCTURAL	JRR
1	4/16/21	GENERATOR MODEL NO.	JRR
.	1/6/21	SUBMITTED FOR REVIEW	JRR

DESIGNED BY: JRR	DATE: 1/6/21
DRAWN BY: JRR	SCALE: N/A
CHECKED BY: JMB	PROJECT NO: 659880

STATE OF NEW HAMPSHIRE – JOHN R. RUSSO No. 15934 – PROFESSIONAL ENGINEER

PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

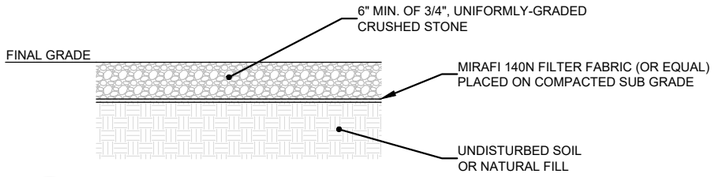
1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

CONSTRUCTION DETAILS

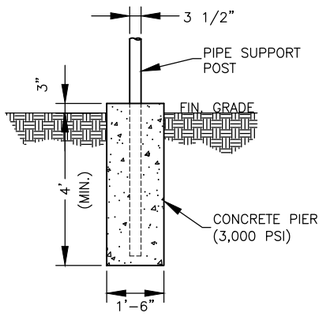
SHEET NUMBER

D-2



1 / D-3 GRAVEL YARD SECTION DETAIL

SCALE: N.T.S.

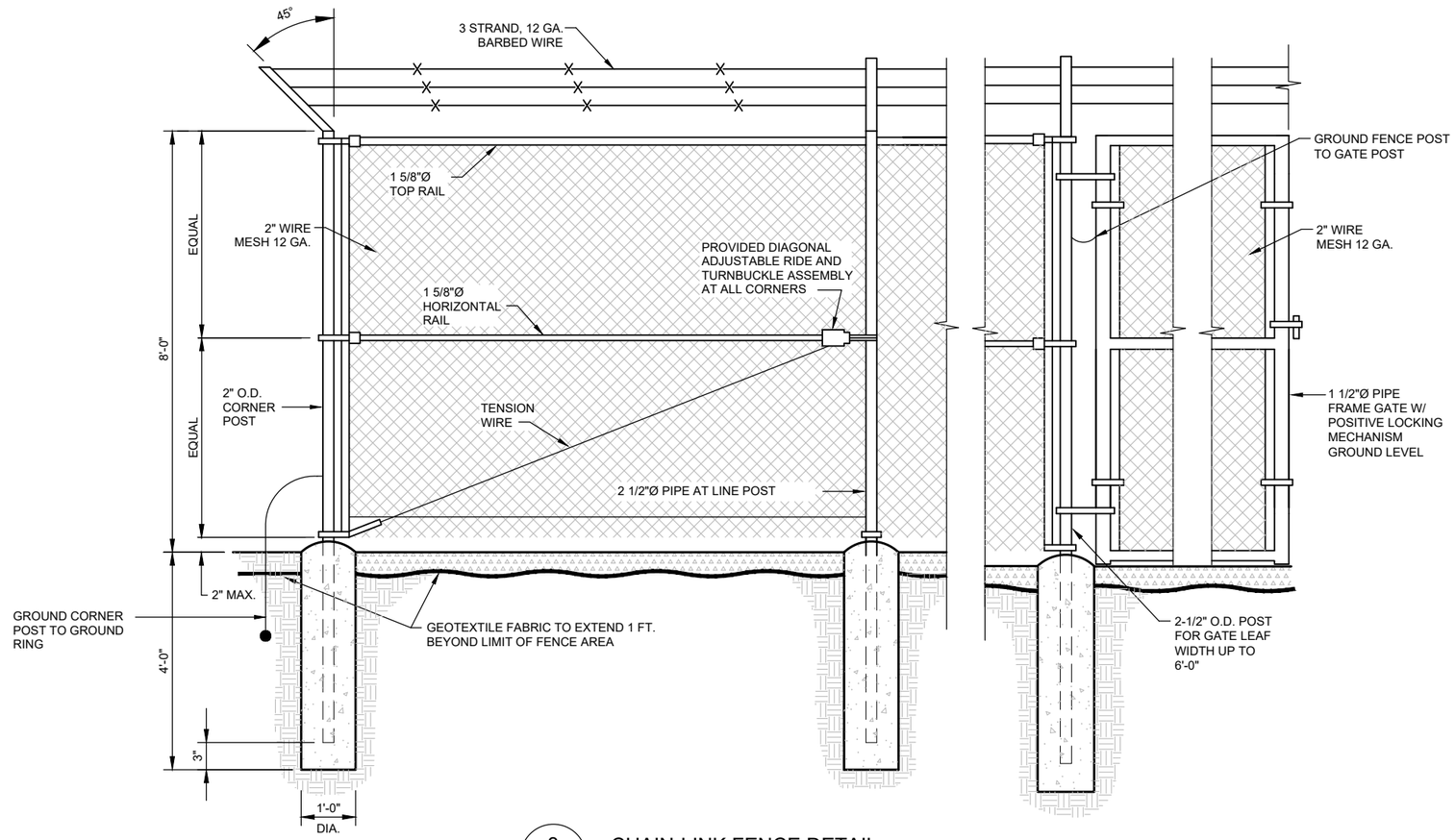


NOTES:

1. FOR EXPOSED LEDGE, PROVIDE GROUT LEVELING PAD. INSTALL (2) 5/8" EXPANSION ANCHORS, 6" LONG.
2. FOR BURIED LEDGE AT LESS THAN 3'-6" BELOW FINISHED GRADE, CORE 8"ø HOLE INTO LEDGE 18" DEEP. FILL AROUND PIPE WITH NON-SHRINK GROUT. USE COAL TAR ON BURIED LENGTH OF PIPE, AND BACKFILL TO FINISHED GRADE.
3. FOR CONCRETE, FASTEN BASEPLATE W/ (2) 5/8" EXPANSION ANCHORS, 6" LONG.
4. FOR POSTS ON CONCRETE OR EXPOSED LEDGE, PROVIDE 4"x6"x3/8" BASEPLATE W/ (2) 11/16" HOLES 6" O/C.

2 / D-3 ICE BRIDGE PIER DETAIL

SCALE: N.T.S.



3 / D-3 CHAIN-LINK FENCE DETAIL

SCALE: N.T.S.

at&t
550 COCHITUATE ROAD
SUITES 13 & 14
FRAMINGHAM, MA 01701

SAI
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183 ROCKINGHAM ROAD
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DESIGNED BY: JRR	DATE: 1/6/21
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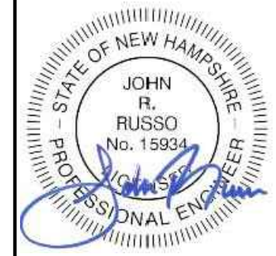
CHECKED BY: JMB	PROJECT NO: 659880



PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

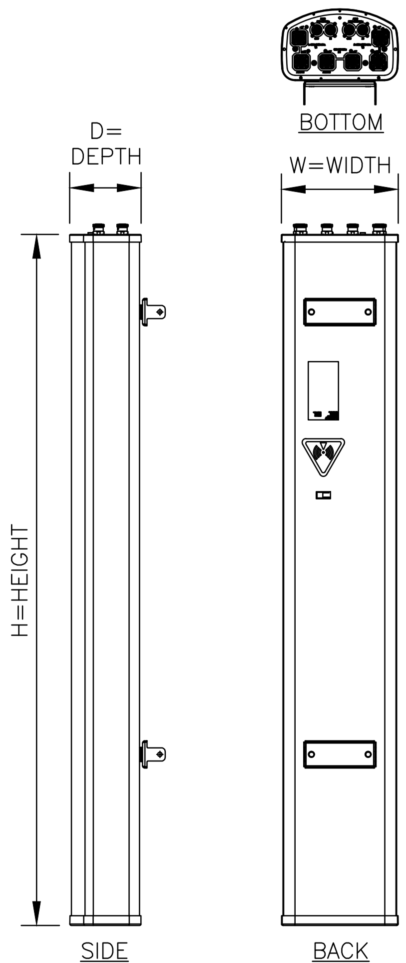
1505 ELM STREET
MANCHESTER, NH

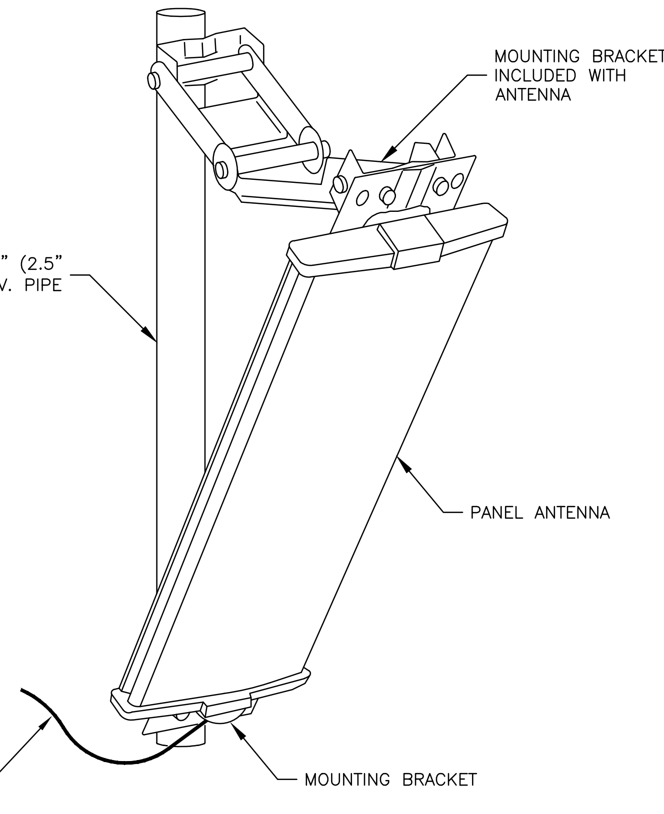
SHEET TITLE

COMPOUND
DETAILS

SHEET NUMBER

D-3

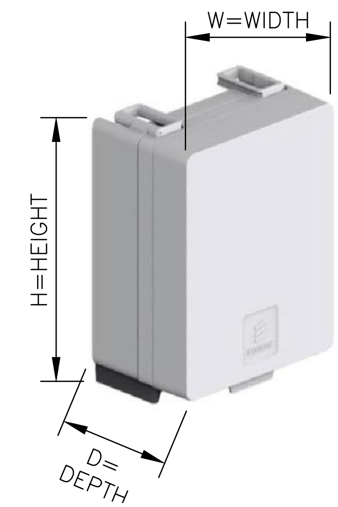




ANTENNA TABLE			
MAKE	MODEL	DIMENSIONS (INCHES) (LxWxD)	WEIGHT (LBS)
(P) CCI	TPA65R-BU8DA-K	96x21x7.8	87±
(P) CCI	DMP65R-BU8DA-K	96x20.7x7.7	95±

1 / D-4 ANTENNAS SPECIFICATIONS

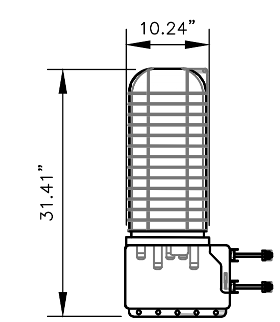
SCALE: N.T.S.



REMOTE RADIO UNIT (RRU) TABLE			
MAKE	MODEL	DIMENSIONS (INCHES) (LxWxD)	WEIGHT (LBS)
(P) ERICSSON	LTE 4478 B14	14.9x13.1x7.3	60±
(P) ERICSSON	LTE 4449 700 (B/C) 850	15x13.2x10.4	73±
(F) ERICSSON	LTE 4415 B30 WCS	14.9x13.2x5.4	44±
(P) ERICSSON	RRUS-8843	18x13.2x11.3	75±

2 / D-4 RRU SPECIFICATIONS

SCALE: N.T.S.



3 / D-4 FIBER/DC SURGE ARRESTOR DETAIL

SCALE: N.T.S.

550 COCHITUATE ROAD
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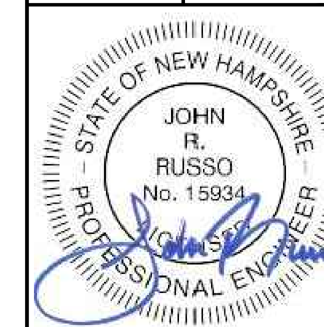

PROJECT TITLE

MANCHESTER
1505 ELM STREET
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NH4369

1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

APPURTENANCE SPECIFICATIONS

SHEET NUMBER

D-4

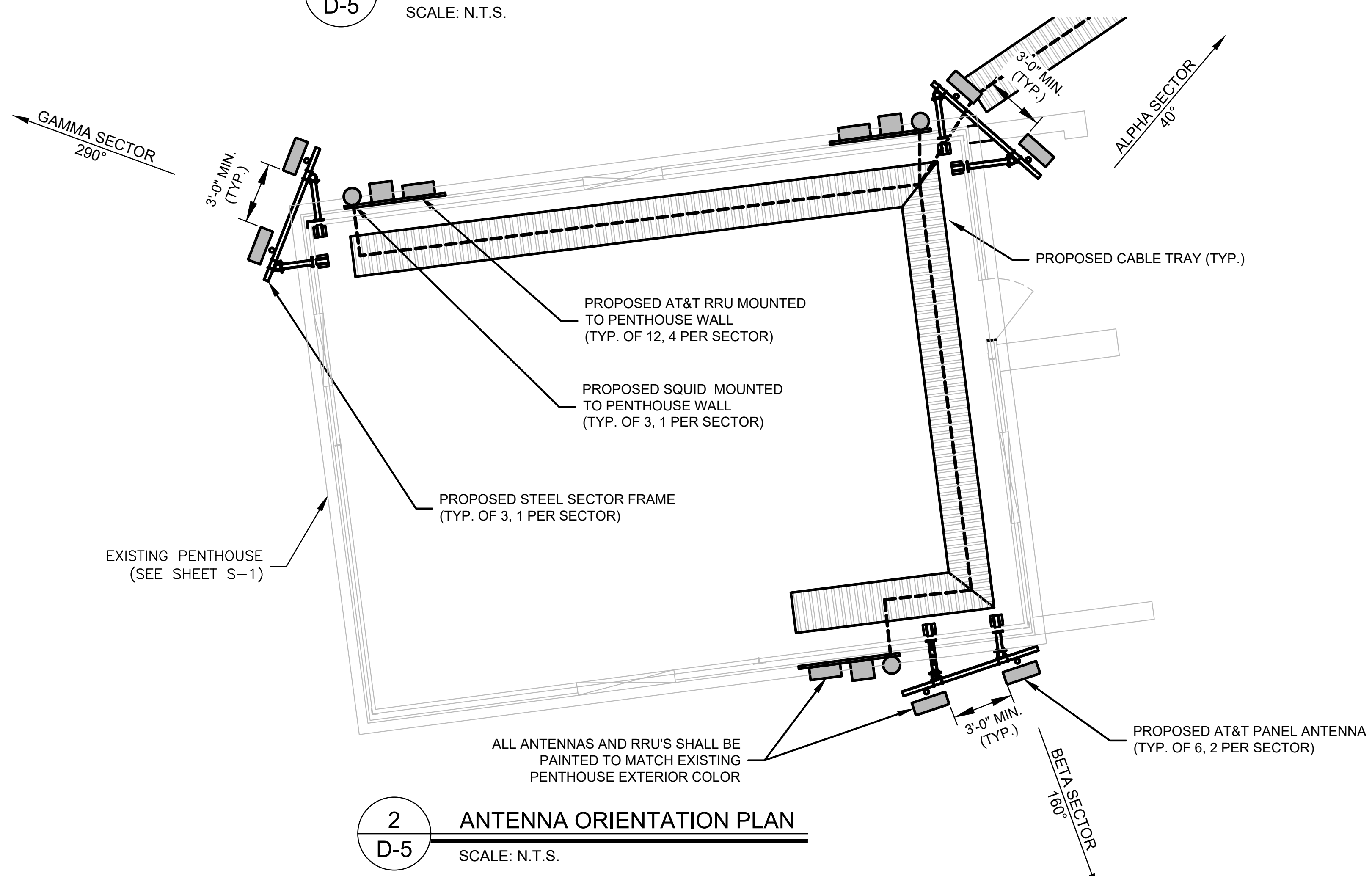
ANTENNA SCHEDULE

SECTOR	POSITION	BAND	ANTENNA	DIMENSIONS (INCHES) (LxWxD)	RAD CENTER	AZIMUTH	RRU	DIMENSIONS (INCHES) (LxWxD)	SURGE	FIBER	DC
ALPHA	A1	LTE B14/AWS/WCS	(P) TPA65R-BU8D	96x21x7.8	69'	40°	(P) LTE 4478 B14 (P) LTE 4415 B30 WCS	14.9x13.1x7.3 14.9x13.2x5.4	(P) 3 FIBER DC SQUID	(P) 2	(P) 6
	A2	LTE 700 BC/850/PCS	(P) DMP65R-BU8DA	96x20.7x7.7	69'	40°	(P) LTE 4449 700 (B/C) 850 (P) LTE RRUS-8843	15x13.2x10.4 18x13.2x11.3			
	A3	-	-	-	-	-	-	-			
	A4	-	-	-	-	-	-	-			
BETA	B1	LTE B14/AWS/WCS	(P) TPA65R-BU8D	96x21x7.8	67'	160°	(P) LTE 4478 B14 (P) LTE 4415 B30 WCS	14.9x13.1x7.3 14.9x13.2x5.4			
	B2	LTE 700 BC/850/PCS	(P) DMP65R-BU8DA	96x20.7x7.7	67'	160°	(P) LTE 4449 700 (B/C) 850 (P) LTE RRUS-8843	15x13.2x10.4 18x13.2x11.3			
	B3	-	-	-	-	-	-	-			
	B4	-	-	-	-	-	-	-			
GAMMA	G1	LTE B14/AWS/WCS	(P) TPA65R-BU8D	96x21x7.8	67'	290°	(P) LTE 4478 B14 (P) LTE 4415 B30 WCS	14.9x13.1x7.3 14.9x13.2x5.4			
	G2	LTE 700 BC/850/PCS	(P) DMP65R-BU8DA	96x20.7x7.7	67'	290°	(P) LTE 4449 700 (B/C) 850 (P) LTE RRUS-8843	15x13.2x10.4 18x13.2x11.3			
	G3	-	-	-	-	-	-	-			
	G4	-	-	-	-	-	-	-			

NOTE: ANTENNA SCHEDULE IS BASED ON RFDS FOR NH4369_MANCHESTER_1505_ELM_STREET DATED 12/19/2021. CONTRACTOR TO VERIFY FINAL RFDS WITH AT&T PRIOR TO CONSTRUCTION.

1 / D-5 FINAL ANTENNA CONFIGURATION TABLE

SCALE: N.T.S.



2 / D-5 ANTENNA ORIENTATION PLAN

SCALE: N.T.S.

NOTES:
1. SEE SHEETS S-1 & N-1 FOR STEEL SECTOR FRAME DETAILS & MEASUREMENTS.

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DRAWN BY: JRR	SCALE: N/A
CHECKED BY: JMB	PROJECT NO: 659880

STATE OF NEW HAMPSHIRE – JOHN R. RUSSO No. 15934 LICENSED – PROFESSIONAL ENGINEER

PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

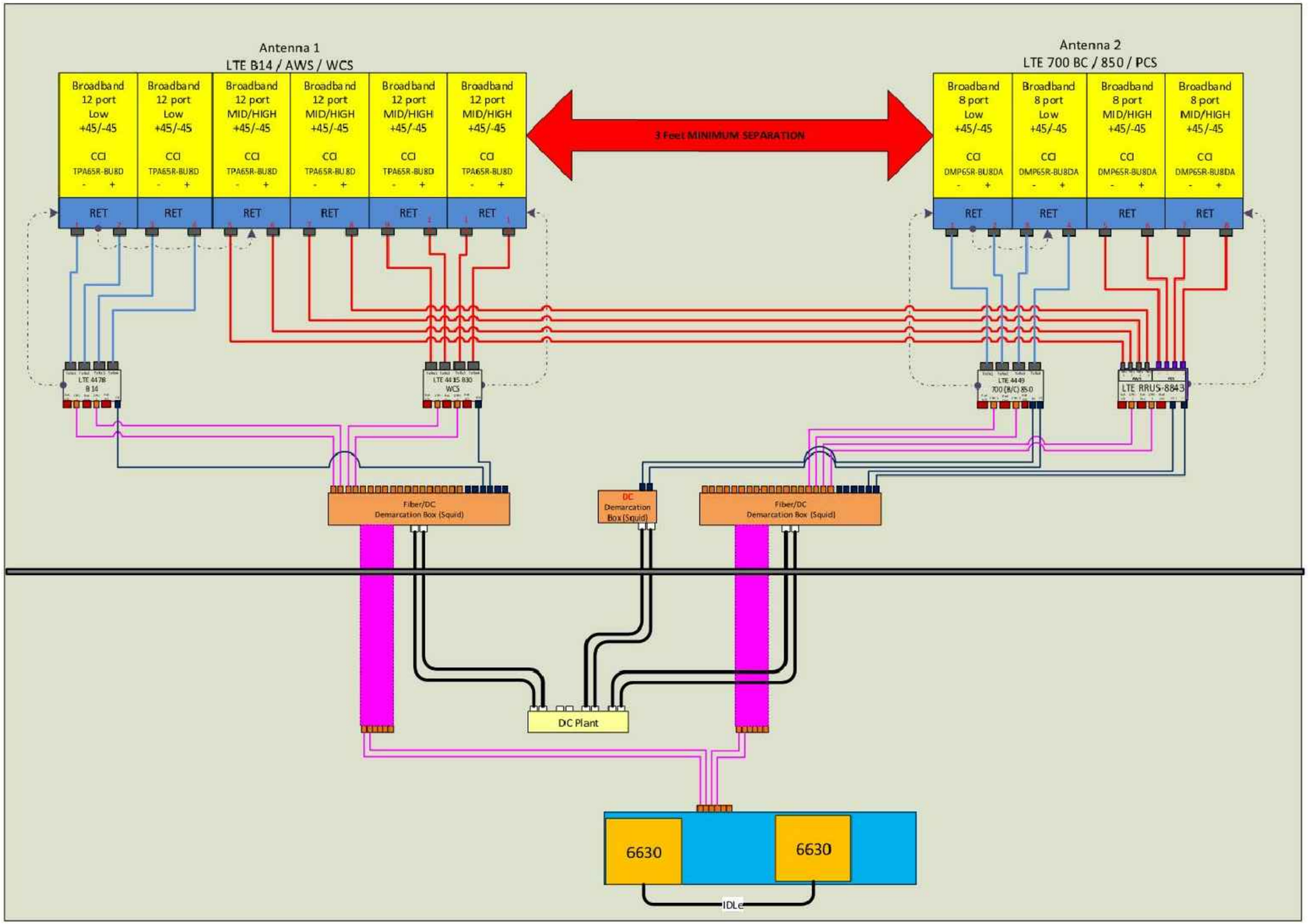
ANTENNA CONFIGURATION & DETAILS

SHEET NUMBER

D-5

Drawing name: M:\W\SAI\659880 NH4369 Manchester NH 1505 Elm Street\AutoCAD\NH4369 Manchester NH 1505 Elm Street CD Rev3.dwg

Diagram - Sector	A	Diagram File Name - NH4369 2ANT 6C.vsd					
Atoll Site Name -	NH4369	Location Name -	MANCHESTER 1505 ELM STREET	Market -	BOSTON	Market Cluster -	NEW ENGLAND
Comments:							



1 D-6 EQUIPMENT PLUMBING DIAGRAM

SCALE: N.T.S.

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STATE OF NEW HAMPSHIRE – JOHN R. RUSSO No. 15934 – PROFESSIONAL ENGINEER

PROJECT TITLE

MANCHESTER
1505 ELM STREET
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NH4369

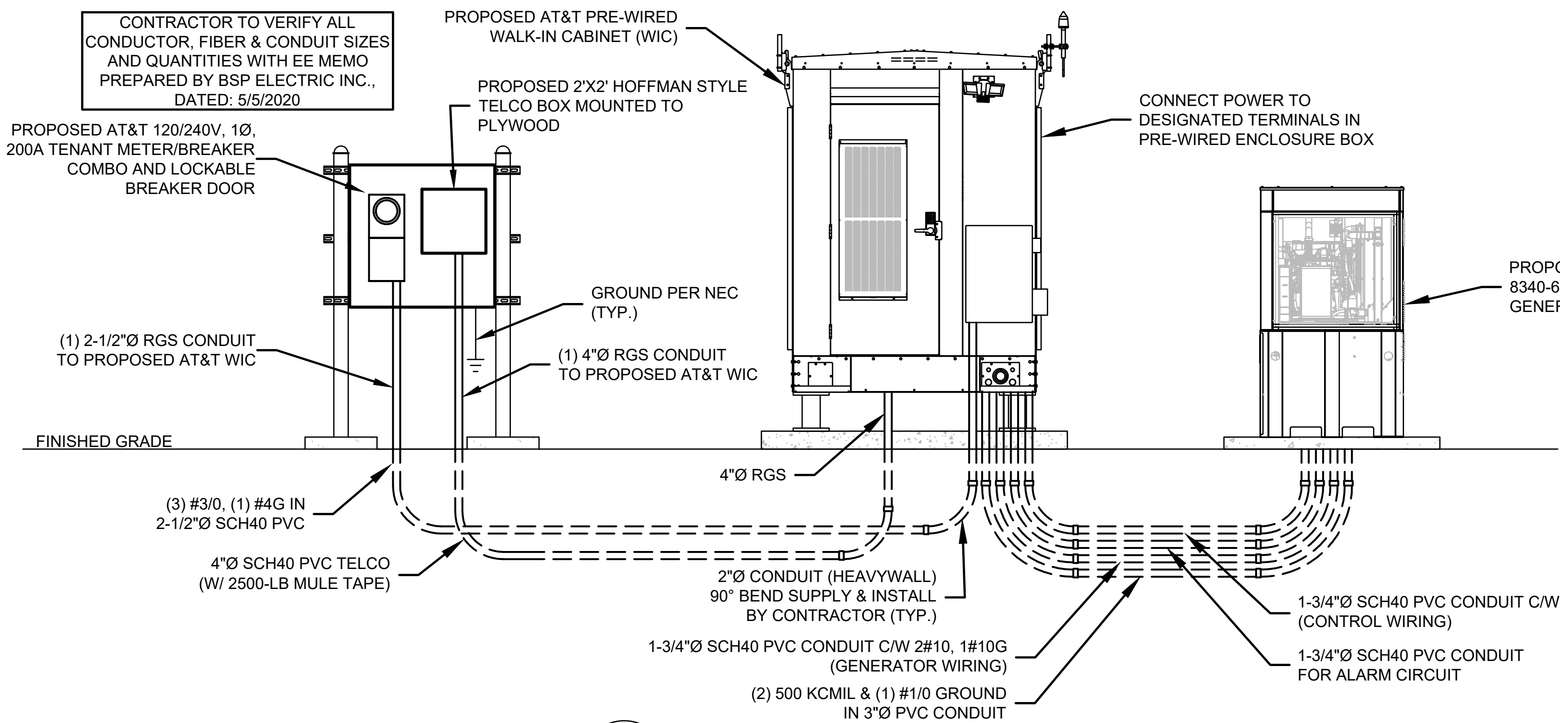
1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

EQUIPMENT
PLUMBING
DIAGRAM

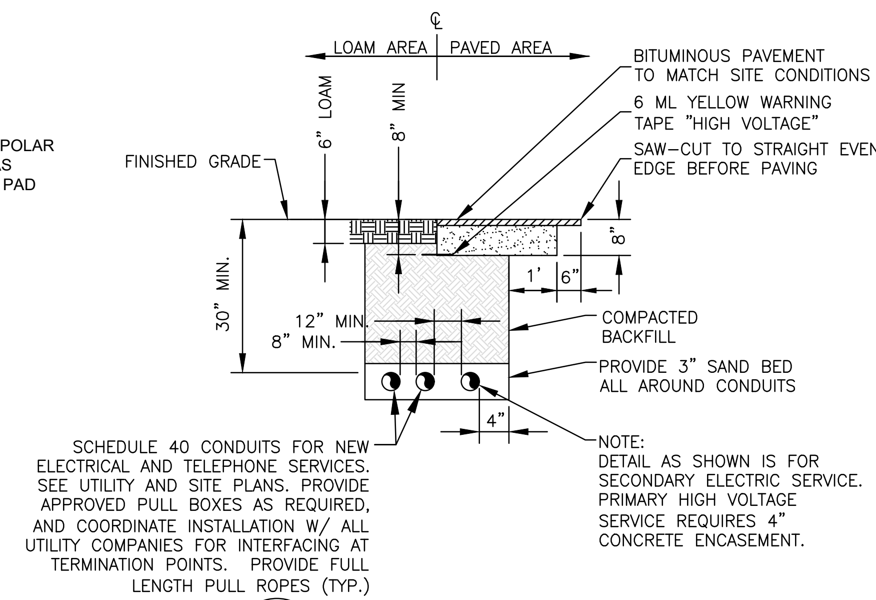
SHEET NUMBER

D-6



1 / E-1 ELECTRICAL RISER DIAGRAM

SCALE: N.T.S.



2 / E-1 BURIED CONDUIT DETAIL

SCALE: N.T.S.

NOTES:
1. ALL EQUIPMENT SHALL BE NEMA 3R RATED.
2. ALL EQUIPMENT SHALL BE LIGHTNING PROTECTED IN ACCORDANCE WITH TIA-222-G AND AT&T MOBILITY STANDARDS.
3. BELOW GRADE CONDUIT SHALL BE SCHEDULE 40 PVC. ABOVE GRADE CONDUIT SHALL BE GALVANIZED RIGID CONDUIT OR LFMC PER NEC REQUIREMENTS. BELOW GRADE PVC CONDUIT SHALL TRANSITION TO RGS PRIOR TO RISING ABOVE GRADE. ALL BENDS SHALL HAVE A MINIMUM 24" RADIUS. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. VERIFY CONDUIT TYPE WITH LOCAL CONSTRUCTION MANAGER AND ADJUST IF NECESSARY. ALL CONDUIT SHALL MEET NEC, STATE, AND LOCAL CODE REQUIREMENTS AS REQUIRED.

MAIN DISTRIBUTION		AT&T	
VOLTAGE	120/240V	VOLTAGE	120/240V
PHASE	1ø	PHASE	1ø
AMPS	800A	AMPS	200A

1: SUBCONTRACTOR SHALL PROVIDE A, SINGLE PHASE, 200 AMP, 3 WIRE, 120/240 VAC, 60HZ SERVICE FOR AT&T SHELTER.

2: SUBCONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF CONSTRUCTION, POWER AND TELEPHONE CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.

3: ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.

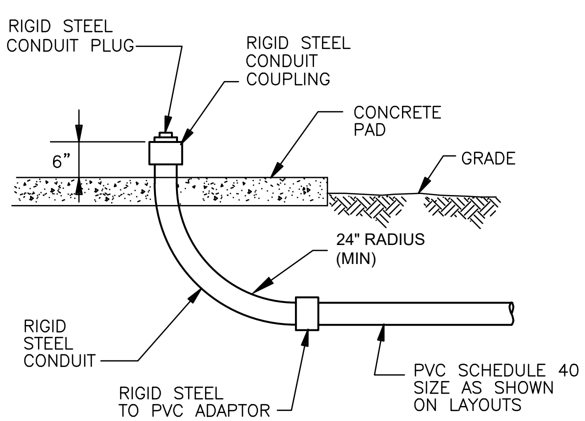
4: SUBCONTRACTOR SHALL INSTALL 36" OF FLEX CONDUIT WITH ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC.) NECESSARY FOR CONNECTION TO EACH RADIO CABINET.

5: SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.

6: POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.

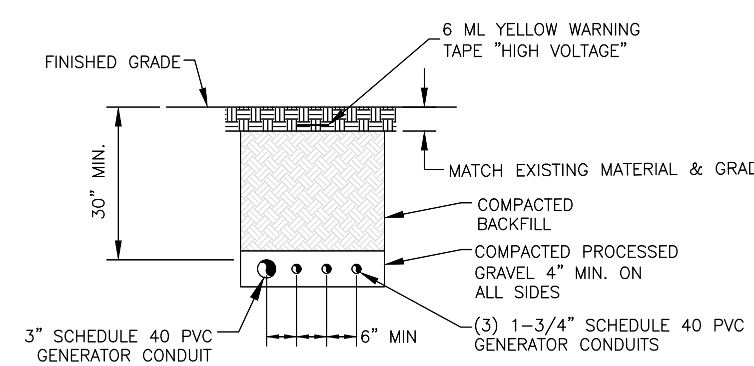
7: CUT, COIL, AND TAPE A 10 FOOT PIGTAIL FROM END OF FLEX CONDUIT FOR TERMINATION BY RADIO EQUIPMENT VENDOR.

8: IF NOT ALREADY PROVIDED, CONTRACTOR SHALL SUPPLY #6 GND WIRE FOR TELCO ATTACHMENT TO THE AT&T PROVIDED



3 / E-1 STEP-UP DETAIL

SCALE: N.T.S.



4 / E-1 GENERATOR CONDUIT DETAIL

SCALE: N.T.S.

550 COCHITUATE ROAD
SUITES 13 & 14
FRAMINGHAM, MA 01701

12 INDUSTRIAL WAY
SALEM, NH 03079

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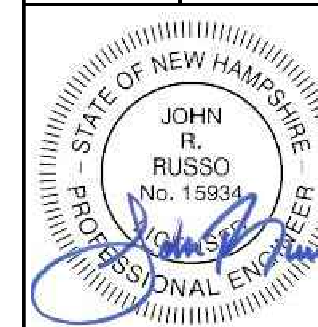


PROJECT TITLE

MANCHESTER
1505 ELM STREET
SITE NUMBER:
NH4369

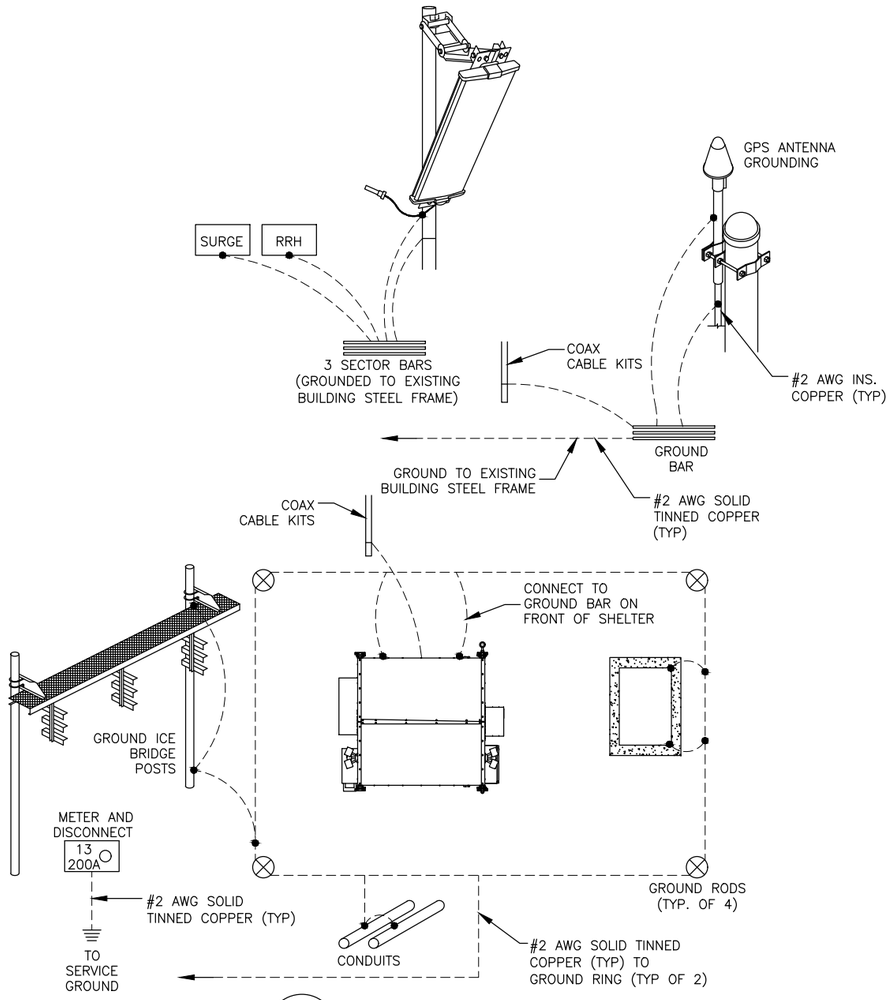
1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

ELECTRICAL DETAILS & RISER DIAGRAM

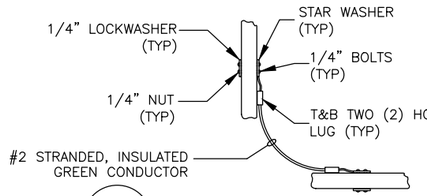
SHEET NUMBER

E-1



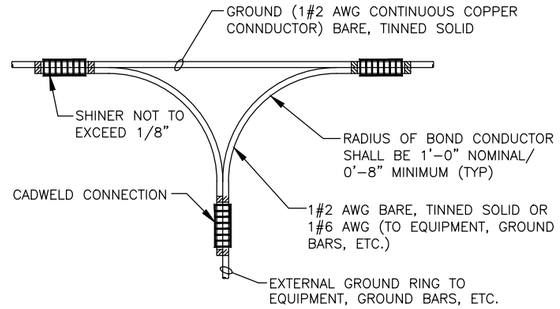
1 G-1 GROUND RISER DIAGRAM

SCALE: N.T.S.



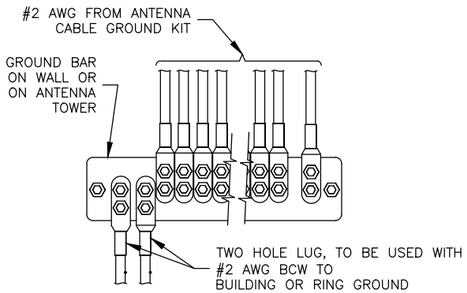
2 G-1 CABLE TRAY GROUNDING

SCALE: N.T.S.



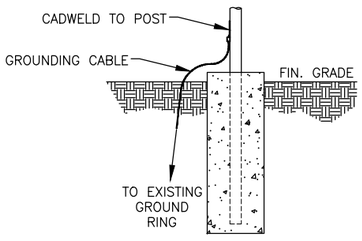
4 G-1 NON-DIRECTIONAL SPLICE

SCALE: N.T.S.



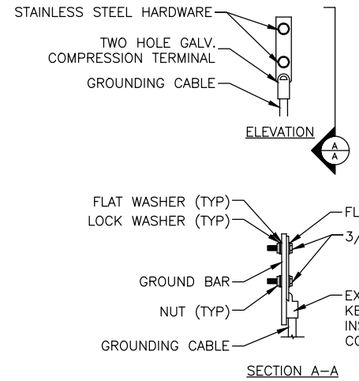
6 G-1 GROUND WIRE TO GROUND BAR INSTALLATION

SCALE: N.T.S.



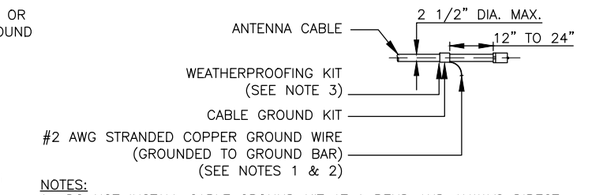
8 G-1 STEEL POST GROUNDING

SCALE: N.T.S.



3 G-1 GROUND BAR CONNECTION DETAIL

SCALE: N.T.S.

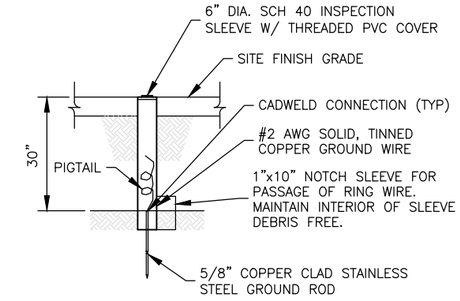


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED. 1-2-1 (1"x2"x1") TAPE WRAPPING SHALL BE COMPLETED OVER ALL WEATHER PROOFING CONNECTIONS THAT EXTENDS MINIMUM 6" BEYOND THE CONNECTION POINT ON COAX LINES. EACH WRAP SHOULD OVERLAP THE PROCEEDING LAYER TO ENSURE WATER TIGHT INTEGRITY.

5 G-1 CABLE GROUND KIT ANTENNA CABLE CONNECTION

SCALE: N.T.S.



6 G-1 GROUND ROD DETAIL

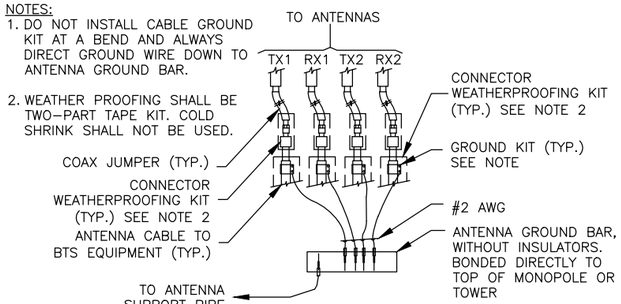
SCALE: N.T.S.

7 G-1 GROUND ROD TEST WELL DETAIL

SCALE: N.T.S.

NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.



9 G-1 GROUND WIRE TO GROUNDING BAR CONNECTION, TOWER/MONOPOLE

SCALE: N.T.S.

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CHECKED BY: JMB	PROJECT NO: 659880

STATE OF NEW HAMPSHIRE - JOHN R. RUSSO No. 15934 - PROFESSIONAL ENGINEER

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SITE NUMBER:
NH4369

1505 ELM STREET
MANCHESTER, NH

SHEET TITLE

GROUNDING SCHEMATIC & DETAILS

SHEET NUMBER

G-1